

18. A method of protecting crops against viruses and microorganisms by administering 3 to 5 g. of copper salts of caprylic-amino acids per 100-150 kg. of crops.

19. A method of protecting crops against animals by administering 3 to 5 g. of zinc salts of butyric-amino acids per 100-150 kg. of crops.

#### REMARKS

The present invention relates to the treatment of crops and, more particularly, to the administration of certain butyric- and caprylic-amino acids or salts to crops to improve crop production.

As detailed in the specification, certain caprylic- or butyric-amino acid salts create surprising results when administered to particular crops. For example, the administration of zinc salts of butyric-amino acids to crops protects the crops against destructive animals. In distinct contrast, the administration of the butyric-amino acids per se, or even the copper salts thereof, has no such beneficial effect.

Similarly, the administration of zinc salts of butyric-amino acids protects crops against animals, but the administration of the butyric-amino acid compounds per se or the copper salts is ineffective for this purpose. Likewise, the administration of copper salts of butyric-amino acids increases the commercial crop yield of potatoes while the administration of butyric-amino acid compounds per se or the zinc salts of butyric-amino acids has no beneficial effect. Furthermore, it has been found that the

copper salts of butyric-amino acids must be applied to the potato crop at the end of the tuberisation phase.

Another example of the surprising results of the present invention is the increase in sugar content of beet crops when copper salts of caprylic amino acids are administered to the beet crop.

With respect to the claims at issue, the improvement of sugar in beet crops is covered by existing claim 15. The improvement as to potatoes is covered by new claim 17. The method of protecting crops against viruses and microorganisms and is covered by new claim 18 and the protection of crops against destructive animals is covered by new claim 19.

We turn now to a discussion of the prior art. UK Appln. No. 2,097,256, which has two inventors in common with the inventors of the instant application, is a broad disclosure of N-butyrylates of alpha-amino acids and salts thereof. While there are suggestions of use in the agricultural field for treatment of seeds and roots or treatment of leaves, there is no teaching of the highly beneficial results obtained in accordance with the instant invention.

Likewise, U.S. Patent No. 4,797,151 to DeMil teaches nothing similar to that which is claimed in the present invention. The DeMil patent only teaches that improved floral fertility can be obtained by applying lipoaminoacids to plants during the period between floral induction and the end of inflorescence. DeMil teaches nothing about increasing crop yields or protecting crops against viruses, microorganisms and destructive animals.

In view of the foregoing, reconsideration and allowance of this application are respectfully requested.

Respectfully submitted,

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